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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,569	01/10/2002	Paul R. Goudy JR.	GUDYP102USD	1779

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EXAMINER
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MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/046,569

Applicant(s)

GOUDY, PAUL R.

Examiner

Kishor Mayekar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-18, 20, 21 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-18, 20, 21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 February 2007 has been entered.
2. Applicant's arguments with respect to claims 7-18, 20, 21 and 23-25 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Objections*

3. Claim 7 is objected to because of the following informalities:
  - o the recital "a first ... electrode" is confusing without the subsequent recital of the second electrode;
  - o the term "and" between the recited structures "a first ... electrode" and "a charging path" needs to be deleted; and
  - o the term "and" between the last two recited structures "a charging path" and

"a further electrode" is needed.

Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 8-12, 21 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 8-12 recites a limitation that the first electrode comprises a plurality of input electrodes and the further electrode comprises a pair of counter electrodes. There is no support for the limitation. Claim 7 recites the subject matter that the first electrode is extending along axially along, within and spaced apart from the hollow interior of the dielectric tube where it has the support in Figs. 35, 41, 44 and 49. But there is no support for the limitation recited in claim 8 when combined with the subject matter of claim 7. The limitation raises an issue of new matter.

The same is applied to claims 21 and 25 to the recitation that the first electrode is

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located in the tube in off-center when combined with the subject matter of claim 7 where the first electrode is extending along axially along, within and spaced apart from the hollow interior of the dielectric tube where it has the support in Figs. 35, 41, 44 and 49.

6. Claims 17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 17, the recitation "the input electrode" lacks antecedent basis.

In claim 21, the claim is indefinite because it recites "a tube" without any correlation to the identical recitation in claim 7.

#### *Claim Rejections - 35 USC § 102 and § 103*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or

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indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 7, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bayliss et al. (US 5,847,494). Bayliss' invention is directed to a corona discharge reactor. Bayliss disclose that the reactor comprises a dielectric tube 2 having a hollow interior, a spiral or helical electrically conductive electrode 14 extending axially, within and spaced apart from the hollow interior of the dielectric tube 2, a charging path to supply current to the spiral or helical electrode 14, an opposite electrode 18 outside the dielectric tube 2 (Figs. 2, 3(a) and 3(b)). Since Bayliss' electrodes 14 and 18 are of the structures as claimed, electrode 14 inherently possesses the recited number of discharge sites and current limiting effect, and the discharge sites and the charging path would also have the recited relations.

As to the subject matter of claim 24, since Bayliss discloses in col. 3, lines 2-5 that the opposite electrode 18 can be in the form of a mesh, it inherently has the discontinuity property.

9. Claims 7, 13-15, 20 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Conrad (US 6,491,879 B2). Conrad's invention is directed to an ozone generator.

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Conrad discloses in Fig. 3 that the ozone generator comprises the recited dielectric tube, spiral or helical electrode, charging path, and further electrode. Since Conrad's ozone generator comprises all the structures as claimed, Conrad's spiral or helical electrode inherently possesses the recited number of discharge sites and current limiting effect, and the discharge sites and the charging path in Conrad's ozone generator would also have the recited relations.

As to the subject matter of each of claims 13-15, Conrad discloses it in col. 7, lines 29-31.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conrad '879 in view of Bayliss '494. The difference between Conrad as applied above and the instant claim is the recited further electrode. Bayliss as applied above shows that the outer electrode can be in the form of a mesh or a metallized surface on the outer surface of the dielectric tube (col. 3, lines 2-5). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Conrad's teachings as shown by Bayliss because the selection of any of known equivalent electrode forms would be within the level of ordinary skill in the art.

11. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conrad '879 as applied to claims 7, 13-15, 20 and 23 above, and further in view of Khatchatrian et

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al. (US 5,911,957). The difference between Conrad as applied above and the instant claim is the recited further electrode. Khatchatrian shows in an ozone generator that the outer electrode can be spiraled around a dielectric (a support) having a plurality of protrusions and a plurality of recesses (Fig. 3). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Conrad's teachings as shown by Khatchatrian because the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

As to the recited spacer disk in claim 18, although both Conrad and Khatchatrian are silent to the spacer, however since the electrodes are electrically separated from each other, they are indeed spaced from each other and the selection of any of known equivalent spacer shapes would be within the level of ordinary skill in the art.

### ***Response to Arguments***

12. Applicant's arguments filed 5 February 2007 have been fully considered but they are not persuasive because of the new grounds of rejections set forth in the paragraphs above.

### ***Conclusion***



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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kishor Mayekar  
Primary Examiner  
Art Unit 1753